Notice of Allowability	Application No.	Applicant(s)	
	10/510,973	GENTNER ET AL.	
	Examiner	Art Unit	
	DANNY W. LEUNG	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amendment filed 10/6/2010*.

2. ☒ The allowed claim(s) is/are *18,21-24,26-28 and 31-40, renumbered as 1-18*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 20041008
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *20101118* .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Shi K. Li/
Primary Examiner, Art Unit 2613

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mark P. Weichdelbaum on 11/18/10.

The application has been amended as follows:

Claims 25 and Claim 29 are canceled.

Claim 31 is amended to be depended on Claim 26.

Claim 18 is amended as follow:

A method for detecting a check-back signal in an optical transmission system for optical signals, comprising:

concentrating a constant proportion of ~~a~~ an output in a defined frequency range of the check-back signal in a narrow-band spectral range;

feeding the check-back signal into the transmission system at ~~the~~ a sending end;

decoupling the check-back signal after a section of the transmission system;

modulating, amplifying and filtering the decoupled check-back signal to isolate the narrow-band spectral range of the check-back signal; and

determining the output of the isolated narrow-band spectral range for the detection of the check-back signal, wherein the amplification of the check-back signal decoupled

from the transmission system is linear and an amplitude limiting process is not performed on the check-back signal so that if there is a high proportion of noise, the check-back signal is still detected in the narrow-band spectral range;

wherein a concentration of a constant proportion of the output of the check-back signal is created in the narrow-band spectral range by evenly distributing ones and zeros from data of the check-back signal, followed by encoding; and

wherein scrambling is used to evenly distribute ones and zeros from the data of the check-back signal and then a CMI or RZ encoding is used to create a spectral line.

Claim 23 is amended as follow:

A method for determining a line discontinuity in a transmission system, comprising:

concentrating a constant proportion of an output in a defined frequency range of ~~the~~ a check-back signal in a narrow-band spectral range;

feeding the check-back signal into the transmission system at ~~the~~ a sending end;

decoupling the check-back signal after a section of the transmission system;

modulating, amplifying an filtering the decoupled check-back signal to isolate the narrow-band spectral range of the check-back signal;

determining the output of the isolated narrow-band spectral range for the detection of the check-back signal, wherein the amplification of the check-back signal decoupled from the transmission system is linear and an amplitude limiting process is not performed

on the check-back signal so that if there is a high proportion of noise, the check-back signal is still detected in the narrow-band spectral range;

determining an output level of the isolated narrow-band spectral range of the check-back signal; and

detecting a line discontinuity in the transmission system when an output level is below a preset threshold, wherein a pump source arranged in ~~the~~ a section of the transmission system to make the necessary amplification of the optical signals is switched off when the system is in operation, or when the system is not in operation it remains switched off, and wherein if no line discontinuity is determined, the pump source is switched on;

wherein a concentration of a constant proportion of the output of the check-back signal is created in the narrow-band spectral range by evenly distributing ones and zeros from data of the check-back signal, followed by encoding; and

wherein scrambling is used to evenly distribute ones and zeros from the data of the check-back signal and then a CMI or RZ encoding is used to create a spectral line.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANNY W. LEUNG whose telephone number is (571)272-5504. The examiner can normally be reached on 10:00am-8:00pm Mon-Thur.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DANNY W LEUNG
Examiner
Art Unit 2613

/D. W. L./
Examiner, Art Unit 2613
11/30/2010

/Shi K. Li/
Primary Examiner, Art Unit 2613